

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matters of:

ELECTRONIC APPLICATION OF KENTUCKY )  
UTILITIES COMPANY FOR AN ADJUSTMENT )  
OF ITS ELECTRIC RATES, A CERTIFICATE )  
OF PUBLIC CONVENIENCE AND NECESSITY ) CASE NO.  
TO DEPLOY ADVANCED METERING ) 2020-00349  
INFRASTRUCTURE, APPROVAL OF CERTAIN )  
REGULATORY AND ACCOUNTING )  
TREATMENTS, AND ESTABLISHMENT OF A )  
ONE-YEAR SURCREDIT )

ELECTRONIC APPLICATION OF LOUISVILLE )  
GAS AND ELECTRIC COMPANY FOR AN )  
ADJUSTMENT OF ITS ELECTRIC AND GAS )  
RATES, A CERTIFICATE OF PUBLIC ) CASE NO.  
CONVENIENCE AND NECESSITY TO DEPLOY ) 2020-00350  
ADVANCED METERING INFRASTRUCTURE, )  
APPROVAL OF CERTAIN REGULATORY AND )  
ACCOUNTING TREATMENTS, AND )  
ESTABLISHMENT OF A ONE-YEAR SURCREDIT )

**KENTUCKY SOLAR INDUSTRIES ASSOCIATION, INC.  
RESPONSES TO JOINT DATA REQUESTS OF KENTUCKY UTILITIES  
COMPANY AND LOUISVILLE GAS AND ELECTRIC COMPANY**

Comes now the Kentucky Solar Industries Association, Inc. (KYSEIA), by and through  
counsel, and submits its responses to the Joint Data Requests of Kentucky Utilities Company and  
Louisville Gas and Electric Company.

Respectfully submitted,

/s/David E. Spenard  
Randal A. Strobo  
Clay A. Barkley  
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**NOTICE AND CERTIFICATION FOR FILING**

Undersigned counsel provides notice that the electronic version of the paper has been submitted to the Commission by uploading it using the Commission's E-Filing System on this 1<sup>st</sup> day of April 2021, and further certifies that the electronic version of the paper is a true and accurate copy of each paper filed in paper medium. Pursuant to the Commission's March 16, 2020, and March 24, 2020, Orders in Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus Covid-19*, the paper, in paper medium, will be filed at the Commission's offices within 30 days of the lifting of the state of emergency.

/s/ David E. Spenard  
David E. Spenard

**NOTICE REGARDING SERVICE**

The Commission has not yet excused any party from electronic filing procedures for this case.

/s/ David. E. Spenard  
David E. Spenard

**Kentucky Solar Industries Association, Inc.**  
**KY PSC Case No. 2020-00349 and**  
**Case No. 2020-00350**  
**Responses to KU LG&E Joint Data Requests**

**Witnesses Responsible:**

Justin R. Barnes

1. Provide copies of all electronic files in native format with formulas intact used in your analysis. This includes copies of all workpapers supporting your testimony, analyses, and conclusions.

**Response:**

Witness Barnes relied upon the material cited in his testimony and did not use any additional electronic files or produce workpapers for his analysis.

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**Witnesses Responsible:**

Justin R. Barnes

2. Provide pdf copies of the following articles or publications listed by Justin R. Barnes in his curriculum vitae attached as Exhibit JRB-1 to his direct testimony in this proceeding:
  - a. Barnes, J., Barnes, C., 2013 RPS Legislation Gauging the Impacts, December 2013.
  - b. Barnes, J., Solar for Everyone? 2012.
  - c. Barnes, J. SREC Market: The Murky Side of Solar, 2012.
  - d. Barnes, J., Varnado, L., The Intersection of Net Metering and Retail Choice: an overview of policy, practice, and issues, 2010.

**Response:**

- a. Attached 2021.04.01 kyseia response ku lge 2 attachment.
- b. Attached 2021.04.01 kyseia response ku lge 2 attachment.
- c. Mr. Barnes does not possess a copy of the document requested in subpart c.
- d. Attached 2021.04.01 kyseia response ku lge 2 attachment.

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**Witnesses Responsible:**

Justin R. Barnes

3. Provide pdf copies of all testimonies submitted by Justin R. Barnes in the following regulatory proceedings identified in his curriculum vitae attached as Exhibit JRB-1 to his direct testimony in this proceeding:
  - a. South Carolina Public Service Commission, Docket No. 2019-182-E.
  - b. Virginia State Corporation Commission, Docket No. PUR-2020-00015.
  - c. North Carolina Utilities Commission, Docket No. E-7, Sub 1219.
  - d. South Carolina Public Service Commission, Docket No. 2018-318-E.
  - e. South Carolina Public Service Commission, Docket No. 2018-319-E.
  - f. New Orleans City Council, Docket No. UD-18-07.
  - g. North Carolina Utilities Commission, Docket No. E-7, Sub 1146.
  - h. Ohio Public Utilities Commission, Docket No. 17-1263-EL-SSO, provide copy of final testimony that was prepared but not filed.
  - i. North Carolina Utilities Commission, Docket No. E-2, Sub 1142.
  - j. Public Utilities Commission of Texas, Control No. 46831.
  - k. Utah Public Service Commission, Docket No. 14-035-114.
  - l. Colorado Public Utilities Commission, Proceeding No. 16A-0055E.
  - m. Public Utility Commission of Texas, Control No. 44941.
  - n. Oklahoma Corporation Commission, Cause No. PUD 20150027.
  - o. South Carolina Public Service Commission, Docket No. 2015-55-E.
  - p. South Carolina Public Service Commission, Docket No. 2014-246-E.

**Response:**

KYSEIA objects to sub-part h of this request, provision of final testimony that was prepared but not filed in Ohio Public Utilities Commission, Docket No. 17-1263-EL-SSO. The testimony was prepared on behalf of a third-party client and was not placed into the record or the public domain. As such, disclosure of the testimony stands to unfairly and unreasonably reflect upon the mental impressions, conclusions, opinions, and legal theories of that third-party. KU and LG&E have no substantial need for this non-public, unfiled testimony for the preparation of their case. Without undue hardship, KU and LG&E have access to the substantial equivalent of the material through the multiple testimonies provided by KYSEIA in response to other sub-parts of the KU and LG&E request for all testimonies submitted by Witness Barnes in 15 other proceedings (provided below).

- a. 2021.04.01 kyseia response ku lge 3 a attachment
- b. 2021.04.01 kyseia response ku lge 3 b attachment
- c. 2021.04.01 kyseia response ku lge 3 c attachment 1  
2021.04.01 kyseia response ku lge 3 c attachment 2  
[Docket E-2 sub 1219]
- d. 2021.04.01 kyseia response ku lge 3 d attachment
- e. 2021.04.01 kyseia response ku lge 3 e attachment
- f. 2021.04.01 kyseia response ku lge 3 f attachment
- g. 2021.04.01 kyseia response ku lge 3 g attachment
- h. See objection (above)
- i. 2021.04.01 kyseia response ku lge 3 i attachment
- j. 2021.04.01 kyseia response ku lge 3 j attachment
- k. 2021.04.01 kyseia response ku lge 3 k attachment
- l. 2021.04.01 kyseia response ku lge 3 l attachment 1  
2021.04.01 kyseia response ku lge 3 l attachment 2
- m. 2021.04.01 kyseia response ku lge 3 m attachment
- n. 2021.04.01 kyseia response ku lge 3 n attachment  
[Docket PUD 201500274]
- o. 2021.04.01 kyseia response ku lge 3 o attachment
- p. 2021.04.01 kyseia response ku lge 3 p attachment

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**Witnesses Responsible:**

Justin R. Barnes

4. On page 9 of Mr. Barnes's Direct Testimony in these proceedings, he references an Order by the North Carolina Utilities Commission in Docket No E-100, Sub 158. In reference to this docket:
  - a. Provide the hedging value in cents per kWh that Duke Energy Carolinas, LLC and Duke Energy Progress, LLC ("Duke Energy") proposed to eliminate in the proceeding.
  - b. Provide a detailed description of how the hedging value approved in Docket No. E-100, Sub 140, was calculated.
  - c. Provide a complete detailed description of Duke Energy's financial hedging practices for fuels.

**Response:**

- a. 0.028 cents/kWh
- b. The calculation was based on the Black-Scholes option pricing model at the recommendation of the North Carolina Utilities Commission ("NCUC") Public Staff. A description of the method as reflected in the Public Staff's Initial Statement is provided below.

"Avoided energy costs should reflect both projected fuel costs and the fuel price hedging benefits of renewable generation for each year of the contract. The Public Staff evaluated the prices of at-the-money Henry Hub natural gas options using the Black-Scholes Option Pricing Model. Henry Hub natural gas options were used in the evaluation because, unlike coal, these financial instruments over terms of less than three years are publicly traded in a robust marketplace with transparent prices. Based on this evaluation, the Public Staff determined that a net option price, the price of a call option minus the price of a put option, for "at-the-money" Henry Hub natural gas options is approximately \$.04 per dekatherm for the 12- and 24-month hedge terms used by the utilities. The Public Staff then converted the \$.04 per dekatherm net option price to a hedge value of 0.028 cents per kWh."

Public Staff Initial Statement (see p. 35-36):

<https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=5af8d4f6-d717-4abe-bdf1-3c5f395cf139>

See 2021.04.01 kyseia response ku lge 4 b attachment.

c. KYSEIA objects to sub-part c of this request which appears calculated to annoy, oppress, unduly burden, and unduly cause expense to KYSEIA. KYSEIA does not possess the information nor does it have reasonable access to the information to “[p]rovide a complete detailed description of Duke Energy’s financial hedging practices for fuels.” Notwithstanding its lack of possession of the information, provision of a “complete detailed description of Duke Energy’s financial hedging practices for fuels,” is unduly burdensome and unduly expensive for KYSEIA.



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**Witnesses Responsible:**

Justin R. Barnes

5. On page 9 of Mr. Barnes's Direct Testimony in these proceedings, he references an Order by the North Carolina Utilities Commission in Docket No E-100, Sub 158, in which a "hedging value" was calculated. Provide a detailed description of the methodology, along with mathematical formulas, used in North Carolina to calculate the hedging value. Provide all descriptions all input values to the mathematical formula.

Response:

Dominion Energy North Carolina has used an online Black-Scholes calculation model for its own hedging value calculations, available at: <http://app.fintools.com/calcs/OptionsCalc.aspx>

The model requires inputs for the current price, the option/strike price, hedging (option) term, a measure of volatility of pricing in the underlying fuel, and an interest rate.

See also response to request 1-4(a) and (b). The NCUC Public Staff used a 1% risk-free interest rate in their calculation, though other parties argued for a higher rate. Note that the specific calculation requires the model to be run multiple times to identify the differences in pricing between a call option (purchase) and a put option (sale). The hedging value is the difference between the call option price and the put option price, translated to \$/kWh using the applicable heat rate for a fuel.

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Justin R. Barnes

6. Provide the normal frequency that QF rates are updated in North Carolina. Provide documentation supporting the response.

**Response:** QF rates are updated every two years in North Carolina, pursuant to G.S. 62-156(b), which requires the NCUC to determine standard contract rates “at least every two years”. The associated ratemaking proceedings are referred to biennial proceedings (e.g., Docket No. E-100, Sub 158 is captioned “In the Matter of Biennial Determination of Avoided Cost Rates for Electric Utility Purchases from Qualifying Facilities – 2018”).

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Justin R. Barnes

7. Provide a side-by-side comparison of Duke Energy's current generation mix and LG&E/KU's current generation mix, showing both MW of capacity and percent of total capacity by generation type.

**Response:**

KYSEIA objects to this request as overly broad, unreasonably vague, and which appears calculated to annoy, oppress, unduly burden, and unduly cause expense to KYSEIA. KYSEIA does not possess the information as it pertains to Duke Energy nor does it have reasonable access to the information to "[p]rovide a side-by-side comparison of Duke Energy's current generation mix and LG&E/KU's current generation mix." Notwithstanding its lack of possession of the current information, provision of such a comparison is unduly burdensome and unduly expensive for KYSEIA. Notwithstanding the foregoing objection, KYSEIA states:

The most recent (dated September 1, 2020) Duke Energy Carolinas ("DEC") and Duke Energy Progress ("DEP") integrated resource plan filings are available at the links below. See p. 106 of the DEC plan and p. 108 of the DEP plan for a capacity breakdown by resource type in % terms. The tables presented in Appendix B of both plans presenting all existing generation units can be used to develop a resource breakdown in terms of MW summer/winter capacity.

DEP: <https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=425097c5-fe15-4925-b1b9-8712b8c5261b>

DEC: <https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=9752b166-f870-4b0c-8469-8f791405d95c>

See 2021.04.01 kyseia response ku lge 7 attachment 1  
See 2021.04.01 kyseia response ku lge 7 attachment 2

Mr. Barnes assumes that KU/LGE are familiar enough with their own generation mixes to conduct a comparison using the information in the resources provided above.

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8. On page 9 of Mr. Barnes's Direct Testimony in these proceedings, he references an Order by the North Carolina Utilities Commission in Docket No E-100, Sub 158, in which a "hedging value" was calculated. Using LG&E and KU's generation mix, calculate the current hedging value for the Companies using the methodology prescribed for Duke Energy. Provide all source documents supporting the inputs to the calculation, including each fuel cost, interest rates, etc., with all formulas intact and cells unlocked.

**Response:**

KYSEIA objects to this request which appears calculated to annoy, oppress, unduly burden, and unduly cause expense to KYSEIA. KYSEIA does not possess the information as it pertains to KU and LG&E to "calculate the current hedging value for the Companies." Notwithstanding its lack of possession of the current information, provision of such a comparison is unduly burdensome and unduly expensive for KYSEIA.

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Justin R. Barnes

9. Identify each regulatory jurisdiction that has required the inclusion of a “hedging value” for purchase rates for small qualifying facilities. Also provide docket number and a copy of the commission order requiring the hedging value.

**Response:**

Please see the KYSEIA response to Commission Staff Data Requests (dated March 19, 2021) request No. 1.

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**Witnesses Responsible:**

Justin R. Barnes

10. Provide the MW capacity and annual MWH output of the three largest QF customers served by Duke Energy Carolinas.

Response:

KYSEIA objects to this request as vague and which appears calculated to annoy, oppress, unduly burden, and unduly cause expense to KYSEIA. Duke Energy Carolinas, rather than KYSEIA, possesses the information regarding its three largest QF customers (for whatever time period that KU and LG&E fail to identify in the request). Notwithstanding its lack of possession of the current information, the vagueness of the request, and without waiving its objection, KYSEIA states:

DEC's list of non-utility generators as of June 30, 2020 is available at the link below.

<https://dms.psc.sc.gov/Attachments/Matter/82f1fa15-73da-4086-bc28-e6fbd4960cfb>

See 2021.04.01 kyseia response ku lge 10 attachment 1

See 2021.04.01 kyseia response ku lge 10 attachment 2

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**Witnesses Responsible:**

Justin R. Barnes

11. On page 9 of Mr. Barnes's Direct Testimony in these proceedings, he states that "avoided cost is typically not controversial." Provide the following in reference to this statement:
  - a. Please identify each jurisdiction to which Mr. Barnes is referring to in making this statement.
  - b. For each such jurisdiction, provide support in the form of a Commission order or utility calculation of avoided costs that demonstrates that line losses are included in the calculation of avoided energy costs.

**Response:**

KYSEIA objects to this request in that it contains a misstatement of Mr. Barnes' testimony. The full statement reads "the existence of avoided line losses as an avoided cost is typically not controversial". The response provided below assumes that the Company's request refers to the correct full statement, to wit, that the existence of line losses is an unavoidable physical phenomenon and typically acknowledged as such in the calculation of avoided cost rates. The response below should not be viewed as a fully exhaustive list of all jurisdictions where line losses are incorporated into avoided cost rate compensation due to QFs.

- a. See Exhibit JRB-2 at pp. 30-31, describing how line losses are incorporated in avoided cost rates in Montana, Oregon, Massachusetts, and California. This document contains citations to orders or applicable regulations. See also footnotes 10, 11, and 12 of Mr. Barnes' testimony, which provide information on how line losses are addressed in North Carolina for the Duke utilities, Duke Energy Florida, and reflected in the locational marginal pricing ("LMP") avoided cost methodology adopted for Kentucky Power's avoided cost rates.

With respect to the North Carolina utilities, in Docket No. E-100, Sub 158 the NCUC directed Dominion Energy North Carolina to exclude a line loss adder in its avoided cost rates based on the existence of significant backflow at substations, while directing the Duke utilities to continue to apply a line loss adder. See the link to the Order below at pp. 9-10.

<https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=eff66bdb-e96f-417f-a526-e88dc8d3a6d9>

In Utah, one of the states referenced in JRB-2 as a state that does not incorporate line losses into avoided cost rates, in October 2020 the Utah Public Service Commission ("UT PSC") issued an Order directing that line losses be included in Rocky Mountain Power's ("RMP") Export Credit

Rate, which is based on an avoided cost pricing model. This arose from a January 2018 Order in which the UT PSC deferred including a line loss adder in RMP's avoided cost rate to the Export Credit Rate proceeding.

October 2020 UT PSC Order (see p. 12):

<https://pscdocs.utah.gov/electric/17docs/1703561/3161911703561o10-30-2020.pdf>

January 2018 UT PSC Order (see p. 31):

<https://pscdocs.utah.gov/electric/17docs/17035T07/29931117035T07and1703537o1-23-2018.pdf>

Finally, in South Carolina, Dominion Energy South Carolina ("DESC") incorporates line losses into its calculation of avoided costs for its Partial Requirements ("PR") rates. See South Carolina Public Service Commission Order No. 2019-487 at p. 46 referencing DESC's testimony regarding the calculation of PR rates, and

Order No. 2019-487: <https://dms.psc.sc.gov/Attachments/Order/bcd3ab33-b1bc-4aa4-b2cc-8b2283d4699d>

DESC Avoided Cost Methodology Tariff Sheet: <https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/south-carolina/rates-and-tariffs/pr-1-avoided-costs-methodology.pdf?la=en&rev=7297e796d9074970bf4c1addeb5b2b62&hash=86BBF389A0FBF19B82D313B56E9EC702>

See 2021.04.01 kyseia response ku lge 11 a attachment.

- b. See response to subpart a.



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**Witnesses Responsible:**

Justin R. Barnes

12. Provide a detailed list of and estimate in cents per kWh for each long-term value provided by customer-generators on KU and LG&E's systems for the energy they flow to the grid. Also, provide a detailed description of each value provided by customer-generators, as well as all workpapers supporting the dollar estimate of the value in cents per kWh.

**Response:**

KYSEIA objects to this request which appears calculated to annoy, oppress, unduly burden, and unduly cause expense to KYSEIA. KYSEIA does not possess the information as it pertains to KU and LG&E to perform the calculation. Notwithstanding its lack of possession of the information, provision of such a comparison is unduly burdensome, particularly in view of the time necessary to perform the calculation, and unduly expensive for KYSEIA. Notwithstanding its lack of possession of information, and without waiving its objection, KYSEIA states:

Mr. Barnes has not conducted a calculation translating these long-term value elements into a long-term avoided cost rate. Such a calculation was not possible to perform under the timeline and with the information available in the current proceeding.

For a list of values includable in a long-term valuation estimate, please see KYSEIA's response to Commission Staff Data Requests (dated March 19, 2021) request No. 7.

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**Witnesses Responsible:**

Justin R. Barnes

13. On page 22, lines 10-14, of Mr. Barnes’s Direct Testimony in these proceeding, he states, “The effectiveness of my recommendation that avoided capacity costs be ‘tethered’ to the integrated resource planning process is contingent on the Commission not permitting LG&E or any other utility to engineer circumstances that allow it to evade the purpose of tethering, given that the obligation to offer payment for capacity is ties to a utility’s relative resource sufficiency or deficiency.” Then on page 22, line 19 of his testimony he gives “determining a plant retirement date” as an example of an “evasion” of “tethering.”
  - a. Please explain whether it is Mr. Barnes’s position or opinion that LG&E and KU’s retirement dates of Mill Creek Units 1 and 2 and E.W. Brown Unit 3 are merely attempts to “engineer circumstances” to avoid higher LQF charges. If so, provide all documents or other evidence of such “engineering.” If not, then explain the relevance of this particular example of an attempt to “engineer circumstances.”
  - b. Provide copies of all environmental documents, decrees, laws, etc. related to Mill Creek Units 1 and 2 and E. W. Brown Unit 3 that Mr. Barnes reviewed prior to reaching his apparent conclusion or suggestion that KU and LG&E are “engineering” the retirement dates of these units.

**Response:**

KYSEIA objects to this request because it is argumentative, and it grossly misstates Mr. Barnes’ testimony in that it omits key context and text surrounding the quoted material. Without waiving its objection, KYSEIA states:

- a. Mr. Barnes’ testimony explains exactly what he means in undertaking this discussion at page 22 line 15-23.

“By way of further explanation, such “evasion” can occur when future utility resource needs are left vague or conditional in the IRP, denoting that future capacity needs are uncertain, making resource sufficiency or deficiency difficult or impossible to ascertain. Only later, the utility makes decisions that imply or create such certainty (e.g., determining a plant retirement date) and seeks to fill that need according to its own preferences (e.g., issuing an RFP) without a reasonable opportunity for QFs to meet that need in part or in full. Thus a resource deficiency exists, but the utility represents that it does not because it is in the process of securing resources, or has secured resources, to meet the need.”

Accordingly, whether such engineering of circumstances has occurred or is occurring is a question that requires consideration of multiple factors. In Mr. Barnes' view, if KU/LGE immediately updates its purchase rates available to QFs to provide capacity compensation consistent with the costs associated with meeting a demonstrated capacity need, it would not be engineering circumstances that evade the intent of tethering avoided cost rates to its IRP. If on the other hand KU/LGE argues that it has no capacity need on the basis that it is securing capacity through a pending RFP, it would be engaged in evasive behavior.

- b. See response to subpart a. above. Mr. Barnes did not review any such documents because his concerns surrounding the engineering of circumstances center not so much on why a capacity need exists as they do on how the Companies respond to that capacity need and whether those actions deprive a QF of the opportunity to meet that need on a level playing field. The nature of this concern is readily clear if one reads his testimony in its entirety.

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Justin R. Barnes

14. Provide Mr. Barnes's calculation of avoided capacity costs for LQF if the retirement dates of Mill Creek Units 1 and 2 and E. W. Brown Unit 3 are moved forward.

**Response:**

This response assumes that a "move forward" of retirement dates refers to the retirements taking place earlier than previously specified (e.g., from 2025 to 2023). Mr. Barnes does not have the information necessary to perform a specific rate calculation. However, on a more general level the effect of moving forward the retirement of any capacity resource would be to decrease the period of resource sufficiency, and therefore increase the time frame during which incremental capacity costs can be deferred or avoided. Under an avoided cost methodology where capacity compensation is calculated only for time periods during which a utility is resource deficient and levelized at a fixed rate for the life of the contract, this would have the effect of increasing the levelized fixed rate. The specific rate would depend on a number of factors, such as the cost of the marginal capacity unit, its operating characteristics, and the characteristics of the QF resource.

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**Witnesses Responsible:**

Benjamin D. Inskeep

15. Provide copies of all electronic files in native format with formulas intact used in your analysis. This includes copies of all workpapers supporting your testimony, analyses, and conclusions.

**Response:**

Please see the KYSEIA response to Commission Staff Data Requests (dated March 19, 2021) request No. 8.

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**Witnesses Responsible:**

Benjamin D. Inskeep

16. Provide pdf copies of the following articles or publications listed by Benjamin D. Inskeep in his curriculum vitae attached as Exhibit BDI-1 to his direct testimony in this proceeding:
  - a. Inskeep, B., States Charting Paths to 100% Targets, March 15, 2019.
  - b. Inskeep, B., The 50 States of Solar, February 2015, April 2015, August 2015, November 2015, and February 2016.
  - c. Inskeep, B., et al., Utility Ownership of Rooftop Solar PV, November 2015.
  - d. Inskeep, B., and A. Shrestha, Comparing Subsidies for Conventional and Renewable Energy, March 2015.
  - e. Daniel, K., B. Inskeep et al., In-State RPS Requirements, November 2014.

**Response:**

- a. See <https://eq-research.com/blog/100/>
- b. 2021.04.01 kyseia response ku lge 16 b attachment 1  
2021.04.01 kyseia response ku lge 16 b attachment 2  
2021.04.01 kyseia response ku lge 16 b attachment 3  
2021.04.01 kyseia response ku lge 16 b attachment 4  
2021.04.01 kyseia response ku lge 16 b attachment 5
- c. 2021.04.01 kyseia response ku lge 16 c attachment
- d. 2021.04.01 kyseia response ku lge 16 d attachment
- e. 2021.04.01 kyseia response ku lge 16 e attachment

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**Witnesses Responsible:**

Benjamin D. Inskeep

17. Please provide a detailed description of Mr. Inskeep's experience performing electric cost of service studies. In this regard, provide the following:
- a. List each electric utility for which Mr. Inskeep has performed a cost-of-service study. For each such utility, provide the test period of the cost-of-service study, the party for whom Mr. Inskeep conducted the cost of service study, the regulatory jurisdiction in which the utility provides service, and the case or docket number as applicable to the cost-of-service study performed by Mr. Inskeep.
  - b. For each cost of service performed by Mr. Inskeep, describe the methodology used to allocate production fixed costs and purchased power costs.

**Response:**

- a. Mr. Inskeep has not performed a cost-of-service study.
- b. See response to 17(a).

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 Case No. 2020-00350  
 Responses to KU LG&E Joint Data Requests**

**Witnesses Responsible:**

Benjamin D. Inskeep

18. Please identify each and every regulatory proceeding in which Mr. Inskeep has testified, including jurisdiction, regulatory authority before whom he appeared, name or style of the proceeding, and the case or docket number of the proceeding.

**Response:**

<b>Jurisdiction</b>	<b>Regulatory Authority</b>	<b>Name/Style</b>	<b>Case/Docket No.</b>
Kentucky	Public Service Commission	Electronic Application Of Kentucky Power Company For (1) A General Adjustment Of Its Rates For Electric Service; (2) Approval Of Tariffs And Riders; (3) Approval Of Accounting Practices To Establish Regulatory Assets And Liabilities; (4) Approval Of A Certificate Of Public Convenience And Necessity; And (5) All Other Required Approvals And Relief	2020-00174
Kentucky	Public Service Commission	Electronic Application of Louisville Gas and Electric Company for an Adjustment of Its Electric and Gas Rates, A Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit	2020-00350
Kentucky	Public Service Commission	Electronic Application of Kentucky Utilities Company for an Adjustment of Its Electric and Gas Rates, A Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting	2020-00349



		Treatments, and Establishment of a One-Year Surcredit	
Kentucky	Public Service Commission	Electronic Consideration of the Implementation of the Net Metering Act	2019-00256

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**Witnesses Responsible:**

Benjamin D. Inskeep

19. On page 8, line 20, of Mr. Inskeep’s Direct Testimony, he refers to the “Bonbright principles” that “govern the broader ratemaking process.” With reference to the “Bonbright principles,” please provide the following:
- a. Provide the specific pages from Bonbright’s text that identify the specific principles that should be used.
  - b. Please list each Bonbright principle, providing a page reference to Bonbright’s text listing the principle.

**Response:**

- a. See James Bonbright, *Principles of Public Utility Rates* (New York: Columbia University Press, 1961), page 291.
- b. See citation provided in response to 19(a). The principles are:
  1. The related, “practical” attributes of simplicity, understandability, public acceptability, and feasibility of application.
  2. Freedom from controversies as to proper interpretation.
  3. Effectiveness in yielding total revenue requirements under the fair-return standard.
  4. Revenue stability from year to year.
  5. Stability of the rates themselves, with a minimum of unexpected changes seriously adverse to existing customers. (Compare “The best tax is an old tax.”)
  6. Fairness of the specific rates in the apportionment of total costs of service among the different consumers.
  7. Avoidance of “undue discrimination” in rate relationships.
  8. Efficiency of the rate classes and rate blocks in discouraging wasteful use of service while promoting all justified types and amounts of use:
    - a. In the control of the total amounts of service supplied by the company:
    - b. In the control of the relative uses of alternative types of service (on-peak versus off-peak electricity, Pullman travel versus coach travel, single-party telephone service versus service from a multi-party line, etc.).

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Benjamin D. Inskeep

20. On page 8 of his testimony, Mr. Inskeep discusses the use of “cost benefit analysis” in the evaluation of subsidies. In this regard:
- a. Provide a detailed description of Mr. Inskeep’s experience performing cost-benefit analysis in the context of electric utilities.
  - b. Please provide copies of each cost benefit analyses performed by Mr. Inskeep along with the name of the utility or entity for whom Mr. Inskeep performed the cost-benefit analysis, the regulatory jurisdiction in which the utility or entity operates, and the case or docket number as applicable to the cost benefit analysis performed by Mr. Inskeep.
  - c. A description of the methodologies used in the cost-benefit analyses performed by Mr. Inskeep.

**Response:**

- a. Mr. Inskeep has not performed a cost-benefit analysis in the context of electric utilities.
- b. See response to 20(a).
- c. See response to 20(a).

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**Witnesses Responsible:**

Benjamin D. Inskeep

21. Please indicate whether Mr. Inskeep or his associates performed a cost-benefit analysis to calculate a value of energy that KU and LG&E's customer-generators supply to the grid. If so, provide all such analysis performed by Mr. Inskeep or his associates, including all Excel spreadsheets or other files or documents.

**Response:**

Neither Mr. Inskeep nor his associates performed a cost-benefit analysis to calculate a value of energy that KU and LG&E's customer-generators supply to the grid.

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**Witnesses Responsible:**

Benjamin D. Inskeep

22. Provide a detailed description of Mr. Inskeep's experience conducting load research for electric utilities. In this regard, provide the following:
  - a. Identify the electric utilities and clients for which Mr. Inskeep has conducted load research.
  - b. Provide all reports and analyses prepared by Mr. Inskeep in regard to the load research studies he has performed.

**Response:**

- a. Mr. Inskeep has not conducted load research for electric utilities.
- b. See response to 22(a).

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**Witnesses Responsible:**

Benjamin D. Inskeep

23. Please provide the level of accuracy that Mr. Inskeep believes should be achieved for a load research sample.

**Response:**

Mr. Inskeep believes the load research study for net metering customers should use the same standards for accuracy as the Companies use when conducting load research studies for its other customers.

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**Witnesses Responsible:**

Benjamin D. Inskeep

24. Based on Mr. Inskeep's experience conducting load research studies for electric utilities, has he determined whether net metering customers have approximately the same, higher, or lower load factors? Provide all load research data analyzed by Mr. Inskeep to reach his conclusion. With respect to this question, load factor refers to both coincident peak load factors and non-coincident peak load factors.

**Response:**

Mr. Inskeep believes it is important for utilities to conduct load research on their net metering customers so they can determine things like whether its net metering customers have approximately the same, higher, or lower load factors. See also the response to 22(a).

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**Witnesses Responsible:**

Benjamin D. Inskeep

25. On page 14 of his testimony, Mr. Inskeep references Oklahoma Corporation Commission, Docket No. PUD 101500273.

- a. Please indicate whether Mr. Inskeep testified in that proceeding.
- b. Please indicate whether Mr. Inskeep provided any analysis of support to any party in that proceeding.

**Response:**

- a. Mr. Inskeep did not provide testimony in that proceeding.
- b. Mr. Inskeep did not provide any analysis of support to any party in that proceeding.



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Benjamin D. Inskeep

26. On page 15, line 8 of Mr. Inskeep’s testimony he refers to a “total resource cost framework.” Regarding this reference, please provide the following:
- a. Please confirm whether “total resource cost framework” refers to the “total resource costs” as defined by the California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects (“California Manual”).
  - b. If “total resource cost framework” does not refer to the methodology described in the California Manual, please define “total resource cost framework” and provide a copy of the sources used to define the framework as referenced by Mr. Inskeep.
  - c. Provide a detailed list of all costs that Mr. Inskeep considers to be “total resource costs.”

Response:

- a. Not confirmed. The reference to the “total resource cost framework” in Mr. Inskeep’s testimony refers to a modified and expanded version of total resource costs defined in the California Standard Practice Manual. Mr. Inskeep’s use of “total resource cost framework” aligns with the perspective described in the National Energy Screening Project’s National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources (NSPM-DER).<sup>1</sup> This “total resource cost framework” includes both considerations of the benefits and costs experienced by the utility system, plus benefits and costs to host customers, as well as consideration of broader policy goals and relevant society-level impacts.
- b. See response to 26(a).
- c. Costs include the following categories, although it is possible that some categories that are expected to provide net benefits could result in net costs (e.g., under significantly larger deployments of distributed generation):
  - Program administration costs
  - Participant costs (capital and O&M costs of the DG resource)
  - Integration costs (if applicable)

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<sup>1</sup> See pp. 3-1 through 3-4, available at:  
[https://www.nationalenergyscreeningproject.org/wp-content/uploads/2020/08/NSPM-DERs\\_08-24-2020.pdf](https://www.nationalenergyscreeningproject.org/wp-content/uploads/2020/08/NSPM-DERs_08-24-2020.pdf)

Please see the KYSEIA response to Commission Staff Data Requests (dated March 19, 2021) request No. 7.

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Benjamin D. Inskeep

27. Please provide a detailed description of the review that Mr. Inskeep performed of the cost-of-service studies submitted by KU and LG&E in these proceedings.

**Response:**

Mr. Inskeep reviewed the testimony, exhibits, and workpapers filed by the Companies at a high level and also relied on the statements and interpretations made by KYSEIA witness Mr. Justin Barnes to Mr. Inskeep.

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Benjamin D. Inskeep

28. On page 17 of Mr. Inskeep's testimony, he states that "few jurisdictions have adopted major changes to net metering or established net metering successor tariffs without requiring one or both." In regard to this statement, provide the following:
- a. Identify each utility that adopted changes to net metering based on an evaluation of a cost-of-service study. Also provide the docket number and date of the order.
  - b. Identify each utility that adopted changes to net metering based on evaluation of a cost benefit analysis. Also provide the docket number and date of the order.
  - c. Identify each utility that adopted changes to net metering based on neither a cost-of-service study nor a cost benefit analysis. Also provide the docket number and date of the order.
  - d. Identify each utility that established a successor tariff. Also provide the docket number and date of the order.
  - e. Identify each utility that established a successor tariff based on an evaluation of a cost-of-service study. Also provide the docket number and date of the order.
  - f. Identify each utility that established a successor tariff based on evaluation of a cost benefit analysis. Also provide the docket number and date of the order.
  - g. Identify each utility that established a successor tariff based on neither a cost-of-service study nor a cost benefit analysis. Also provide the docket number and date of the order.

**Response:**

KYSEIA objects to this request as overly broad, and which appears calculated to annoy, oppress, unduly burden, and unduly cause expense to KYSEIA. KU and LG&E not only request a jurisdiction-by-jurisdiction survey but further a utility-by-utility survey. KYSEIA does not possess the information nor does it have reasonable access to the information for such a survey. Notwithstanding its lack of possession of the current information, provision of such a survey is unduly burdensome and unduly expensive for KYSEIA as well as being impracticable in view of the procedural schedule in this proceeding. Notwithstanding the foregoing objection, KYSEIA states:

- a. Mr. Inskeep's statement referenced in this question is based on his professional experience, which has included reviewing and tracking numerous U.S. electric utility proceedings and

state legislation, as well as reviewing articles, reports, and presentations and participating in industry conferences, webinars, and events, related to net metering and distributed generation. Mr. Inskeep does not maintain or have in his possession a schedule of every single utility net metering change with the specific information requested by the Companies.

- b. See response to 28(a).
- c. See response to 28(a).
- d. See response to 28(a).
- e. See response to 28(a).
- f. See response to 28(a).
- g. See response to 28(a).

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Benjamin D. Inskeep

29. On page 17 of Mr. Inskeep’s testimony, he states that “[a] cost of service analysis is more commonly used in ratemaking proceedings where specific revisions to DG customer purchase or compensation rates are being proposed.”
- a. Please provide a list of all cases, dockets, or instances in which a cost of service analysis is used in a ratemaking proceeding where specific revision to DG customer purchase or compensation rates are being proposed.
  - b. Please provide all empirical data supporting Mr. Inskeep’s claim that this approach is more commonly used in those instances.

**Response:**

KYSEIA objects to this request as overly broad, and which appears calculated to annoy, oppress, unduly burden, and unduly cause expense to KYSEIA. KU and LG&E not only request a jurisdiction-by-jurisdiction survey but further a utility-by-utility survey. KYSEIA does not possess the information nor does it have reasonable access to the information for such a survey. Notwithstanding its lack of possession of the current information, provision of such a survey is unduly burdensome and unduly expensive for KYSEIA as well as being impracticable in view of the procedural schedule in this proceeding. Notwithstanding the foregoing objection, KYSEIA states:

- a. See response to 28(a).
- b. See response to 28(a).

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**Witnesses Responsible:**

Benjamin D. Inskeep

30. On page 17 of Mr. Inskeep’s testimony, he states that, “Typically, benefit-cost analyses have been performed by consultants with subject matter expertise at the request of legislators or regulators.”
- a. Please provide a list of all cases, dockets, or instances in which benefit-cost analyses have been performed by consultants with subject matter expertise at the request of legislators or regulators.
  - b. Please provide all empirical data supporting Mr. Inskeep’s claim that this approach is more typically used in those instances.

**Response:**

KYSEIA objects to this request as overly broad, vague, and which appears calculated to annoy, oppress, unduly burden, and unduly cause expense to KYSEIA. KU and LG&E not only request a jurisdiction-by-jurisdiction survey but further a utility-by-utility survey. KYSEIA does not possess the information nor does it have reasonable access to the information for such a survey. Notwithstanding its lack of possession of the current information, provision of such a comparison is unduly burdensome and unduly expensive for KYSEIA as well as being impracticable in view of the procedural schedule in this proceeding. Notwithstanding the foregoing objection, KYSEIA states:

- a. See response to 28(a).

See also ICF International, “Review of Recent Cost-Benefit Studies Related to Net Metering and Distributed Solar” (May 2018).

- b. See response to 28(a) and 30(a).

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**Witnesses Responsible:**

Benjamin D. Inskeep

31. Provide a detailed list of and estimate in cents per kWh for each long-term value provided by customer-generators on KU and LG&E's systems for the energy they flow to the grid. Also, provide a detailed description of each value provided by customer-generators, as well as all workpapers supporting the dollar estimate of the value in cents per kWh.

**Response:**

The Companies have failed to conduct the data collection and analysis necessary to make such an evaluation for all of the long-term benefits provided by customer-generators on KU and LG&E's systems. See also the KYSEIA response to Commission Staff Data Requests (dated March 19, 2021) request No. 7.



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Benjamin D. Inskeep

32. On page 28 of Mr. Inskeep's testimony, he identifies energy-related costs of \$131,381,848 for the residential class. Please provide the following information regarding this amount:
- a. Please indicate whether Mr. Inskeep attempted to derive this cost from the Company's cost of service study? If not, please explain why he did not perform such an analysis. If he did, provide a copy of Mr. Inskeep's analysis.
  - b. Provide a breakdown of each individual operation and maintenance expense from the Company's cost of service study included in amount.
  - c. A breakdown of each individual rate base component from the Company's cost of service included in the amount.
  - d. Please provide a detailed explanation of whether these costs represent "avoided energy costs?"
  - e. If these costs do not represent avoided energy costs, then provide a detailed explanation of what they do represent.

**Response:**

- a. Mr. Inskeep obtained the referenced value from LG&E's "2020\_Att\_LGE\_PSC\_1-56\_Exhibit\_WSS-2,WSS-30,WSS-32\_LGE\_Electric\_COSS\_LOLP," tab "RS," cell F49. Mr. Inskeep did not need to perform any additional analysis to obtain the value, as it was provided by the Company.
- b. See response to 32(a).
- c. See response to 32(a).
- d. These costs represent the Company's Net Cost of Service for Energy-Related Production in the Company's embedded class cost of service study based on the Company's test year, and as calculated by the Company.
- e. See response to 32(d).

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Benjamin D. Inskeep

33. In a Benefit-Cost Analysis of distributed energy resources (DERs), please provide a detailed explanation of the considerations, if any, that should be given to the loss or displacement of coal mining jobs in Kentucky with the implementation of DERs.

**Response:**

Mr. Inskeep is not aware of any analysis indicating coal mining jobs in Kentucky have been or will be lost or displaced by DERs. Mr. Inskeep's general understanding is that coal jobs have long been declining in states like Kentucky due to other industry trends such as mechanization, shifts to lower sulfur coal, and declining demand driven by coal plant retirements, among other factors not directly related to DERs. DER industries, such as rooftop solar, provide an opportunity for counteracting, at least in part, secular trends that have resulted in coal mining job declines because DER deployment can create new local jobs.

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Benjamin D. Inskeep

34. Please provide a citation to the legal authority (i.e., regulatory commission order, statute, or regulation) for each entry in Exhibits BDI-3 and BDI-4 to the testimony of Benjamin Inskeep.

**Response:**

KYSEIA objects to this request to the extent that it requests Mr. Inskeep to provide a legal opinion. Notwithstanding this objection, KYSEIA provides the following exhibits.

Please also note that the attached BDI-PSC-IR-1 contains a correction of information for Texas (EPE) previously provided in Mr. Inskeep’s Direct Testimony (filed March 5, 2021) at page 60 [PDF 60 of 130]. The correct period is 20 years.

**Exhibit BDI-3**

State	Citation
AR	Act 464 (2019); Arkansas Public Service Commission Orders: (1) <a href="http://www.apscservices.info/pdf/16/16-027-R_423_1.pdf">http://www.apscservices.info/pdf/16/16-027-R_423_1.pdf</a> ; (2) <a href="http://www.apscservices.info/pdf/16/16-027-R_465_1.pdf">http://www.apscservices.info/pdf/16/16-027-R_465_1.pdf</a>
AZ	Arizona Corporation Commission, Order: <a href="https://docket.images.azcc.gov/0000176114.pdf">https://docket.images.azcc.gov/0000176114.pdf</a> (January 2017)  <a href="https://images.edocket.azcc.gov/docketpdf/0000182160.pdf">https://images.edocket.azcc.gov/docketpdf/0000182160.pdf</a> (August 2017)
CA	California Public Utilities Commission:  D.14-03-041 (NEM 1.0), <a href="https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M089/K386/89386131.PDF">https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M089/K386/89386131.PDF</a>  D.16-01-044 (NEM 2.0), <a href="https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M158/K181/158181678.pdf">https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M158/K181/158181678.pdf</a>
CT	HB 5002 (2019): <a href="https://www.cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Bill&amp;which_year=2019&amp;bill_num=5002">https://www.cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Bill&amp;which_year=2019&amp;bill_num=5002</a> ;  Connecticut Public Utilities Regulatory Authority, Order:

State	Citation
	<a href="http://www.dpuc.state.ct.us/DOCKCURR.NSF/8e6fc37a54110e3e852576190052b64d/a21495b0e4968ba68525869900545978/\$FILE/200701-021021.pdf">http://www.dpuc.state.ct.us/DOCKCURR.NSF/8e6fc37a54110e3e852576190052b64d/a21495b0e4968ba68525869900545978/\$FILE/200701-021021.pdf</a>
HI	Hawaii Public Utilities Commission, Orders: (1) <a href="https://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A17J23B15234B02181">https://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A17J23B15234B02181</a> ; (2) <a href="http://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A15J13B15422F90464">http://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A15J13B15422F90464</a>
IA	SF 583 (2020)
IL	SB 2814 (2016)
IN	SEA 309 (2017)
KS	K.S.A. 66-1263 through 66-1271
KY	The Net Metering Act (SB 100, 2019)
LA	Louisiana Public Service Commission, General Order 9-19-19: <a href="https://lpscpubvalence.lpsc.louisiana.gov/portal/PSC/DocumentDetails?documentId=130395">https://lpscpubvalence.lpsc.louisiana.gov/portal/PSC/DocumentDetails?documentId=130395</a>
MI	Public Acts 341 and 342 (2016); Final Orders in U-20162 (DTE, 2019, <a href="https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t0000004SM3yAAG">https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t0000004SM3yAAG</a> ) and U-20697 (Consumers Energy, 2020, <a href="https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t000000HwkkyAAB">https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t000000HwkkyAAB</a> )
NH	New Hampshire Public Utilities Commission, Order: <a href="https://www.puc.nh.gov/Regulatory/Docketbk/2016/16-576/ORDERS/16-576_2017-06-23_ORDER_26029.PDF">https://www.puc.nh.gov/Regulatory/Docketbk/2016/16-576/ORDERS/16-576_2017-06-23_ORDER_26029.PDF</a>
NY	New York Public Service Commission, Orders: <a href="http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={E5A4CFD8-BD26-4287-B3F1-C1A72A3540BA}">http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={E5A4CFD8-BD26-4287-B3F1-C1A72A3540BA}</a> (2020); <a href="http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={5B69628E-2928-44A9-B83E-65CEA7326428}">http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={5B69628E-2928-44A9-B83E-65CEA7326428}</a> (2017)
SC	Act 62 (2019)
UT	Utah Public Service Commission, Order: <a href="https://pscdocs.utah.gov/electric/14docs/14035114/29703614035114oass9-29-2017.pdf">https://pscdocs.utah.gov/electric/14docs/14035114/29703614035114oass9-29-2017.pdf</a>

**Exhibit BDI-4**

<b>State</b>	<b>Citation</b>
<b>AR</b>	SB 145 (2019)  Phase 1 NEM Order: <a href="http://www.apscservices.info/pdf/16/16-027-R_212_1.pdf">http://www.apscservices.info/pdf/16/16-027-R_212_1.pdf</a>  Phase 3 NEM Order: <a href="http://www.apscservices.info/pdf/16/16-027-R_423_1.pdf">http://www.apscservices.info/pdf/16/16-027-R_423_1.pdf</a>
<b>AZ</b>	Arizona Corporation Commission, Orders: <a href="https://docket.images.azcc.gov/0000176114.pdf">https://docket.images.azcc.gov/0000176114.pdf</a> (January 2017)  <a href="https://images.edocket.azcc.gov/docketpdf/0000182160.pdf">https://images.edocket.azcc.gov/docketpdf/0000182160.pdf</a> (August 2017)
<b>CA</b>	California Public Utilities Commission:  D.14-03-041 (NEM 1.0), <a href="https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M089/K386/89386131.PDF">https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M089/K386/89386131.PDF</a>  D.16-01-044 (NEM 2.0), <a href="https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M158/K181/158181678.pdf">https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M158/K181/158181678.pdf</a>
<b>CT</b>	HB 5002 (An Act Concerning a Green Economy and Environmental Protection), enacted June 28, 2019: <a href="https://www.cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Bill&amp;which_year=2019&amp;bill_num=5002">https://www.cga.ct.gov/asp/cgabillstatus/cgabillstatus.asp?selBillType=Bill&amp;which_year=2019&amp;bill_num=5002</a>  Connecticut Public Utilities Regulatory Authority, Order: <a href="http://www.dpuc.state.ct.us/DOCKCURR.NSF/8e6fc37a54110e3e852576190052b64d/a21495b0e4968ba68525869900545978/\$FILE/200701-021021.pdf">http://www.dpuc.state.ct.us/DOCKCURR.NSF/8e6fc37a54110e3e852576190052b64d/a21495b0e4968ba68525869900545978/\$FILE/200701-021021.pdf</a>
<b>HI</b>	Hawaii Public Utilities Commission, Order: <a href="https://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A17J23B15234B02181">https://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A17J23B15234B02181</a>  HECO Companies' DG tariffs: <a href="https://www.hawaiianelectric.com/products-and-services/customer-renewable-programs/private-rooftop-solar">https://www.hawaiianelectric.com/products-and-services/customer-renewable-programs/private-rooftop-solar</a> and <a href="https://www.hawaiianelectric.com/billing-and-payment/rates-and-regulations">https://www.hawaiianelectric.com/billing-and-payment/rates-and-regulations</a>
<b>IA</b>	SF 583 (2020)
<b>IL</b>	SB 2814 (2016)
<b>IN</b>	SEA 309 (2017)

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KS	K.S.A. 66-1263 through 66-1271; Westar Demand Rate Decision (2018): <a href="http://estar.kcc.ks.gov/estar/ViewFile.aspx?Id=6a4e143a-438b-4437-8364-894d8b7310d5">http://estar.kcc.ks.gov/estar/ViewFile.aspx?Id=6a4e143a-438b-4437-8364-894d8b7310d5</a> ;
	KCP&L Demand Rate Decision (2018): <a href="http://estar.kcc.ks.gov/estar/ViewFile.aspx/20181213103959.pdf?Id=27049d06-06e6-4502-a753-01adb0a7f82e">http://estar.kcc.ks.gov/estar/ViewFile.aspx/20181213103959.pdf?Id=27049d06-06e6-4502-a753-01adb0a7f82e</a> ;
	Kansas Supreme Court, No. 120,436: <a href="https://www.kscourts.org/KSCourts/media/KsCourts/Opinions/120436_1.pdf?ext=.pdf">https://www.kscourts.org/KSCourts/media/KsCourts/Opinions/120436_1.pdf?ext=.pdf</a> ;
	Kansas Corporation Commission, 2021 Order: <a href="https://estar.kcc.ks.gov/estar/ViewFile.aspx/20210225103241.pdf?Id=dbf0d78a-209e-4c08-82a9-8a58810d3cef">https://estar.kcc.ks.gov/estar/ViewFile.aspx/20210225103241.pdf?Id=dbf0d78a-209e-4c08-82a9-8a58810d3cef</a>
KY	The Net Metering Act (SB 100, 2019)
LA	Louisiana Public Service Commission, Phase 1 NEM Order (General Order 12-8-2016): <a href="https://lpscpubvalence.lpsc.louisiana.gov/portal/PSC/DocumentDetails?documentId=132941">https://lpscpubvalence.lpsc.louisiana.gov/portal/PSC/DocumentDetails?documentId=132941</a>
	Phase 2 NEM Order (General Order 9-19-19): <a href="https://lpscpubvalence.lpsc.louisiana.gov/portal/PSC/DocumentDetails?documentId=130395">https://lpscpubvalence.lpsc.louisiana.gov/portal/PSC/DocumentDetails?documentId=130395</a>
MI	Public Acts 341 and 342 (2016); Final Orders in U-20162 (DTE, 2019, <a href="https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t0000004SM3yAAG">https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t0000004SM3yAAG</a> ) and U-20697 (Consumers Energy, 2020, <a href="https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t000000HwkyAAB">https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t000000HwkyAAB</a> )
NH	New Hampshire Public Utilities Commission, Order: <a href="https://www.puc.nh.gov/Regulatory/Docketbk/2016/16-576/ORDERS/16-576_2017-06-23_ORDER_26029.PDF">https://www.puc.nh.gov/Regulatory/Docketbk/2016/16-576/ORDERS/16-576_2017-06-23_ORDER_26029.PDF</a>
NY	New York Public Service Commission, Orders: <a href="http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={E5A4CFD8-BD26-4287-B3F1-C1A72A3540BA}">http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={E5A4CFD8-BD26-4287-B3F1-C1A72A3540BA}</a> (2020);
	<a href="http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={5B69628E-2928-44A9-B83E-65CEA7326428}">http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={5B69628E-2928-44A9-B83E-65CEA7326428}</a> (2017)
SC	Act 62 (2019);
	Duke Energy Progress/Duke Energy Carolinas Joint Application: <a href="https://dms.psc.sc.gov/Attachments/Matter/9dc8574f-5814-4466-aa0f-ca0df5eab87b">https://dms.psc.sc.gov/Attachments/Matter/9dc8574f-5814-4466-aa0f-ca0df5eab87b</a>

State	Citation
UT	Utah Public Service Commission, Orders: (1) <a href="https://pscdocs.utah.gov/electric/14docs/14035114/29703614035114oass9-29-2017.pdf">https://pscdocs.utah.gov/electric/14docs/14035114/29703614035114oass9-29-2017.pdf</a> and (2) <a href="https://pscdocs.utah.gov/electric/17docs/1703561/3161911703561o10-30-2020.pdf">https://pscdocs.utah.gov/electric/17docs/1703561/3161911703561o10-30-2020.pdf</a>